Space Weather Forecast

Issued on Sunday, 29 May 2022 at 13:29 Local

This forecast provides a four day assessment of space weather events. The probabilities stated below are for reaching or exceeding the given levels. For more information about space weather impacts please see the Met Office Space Weather Scales https://www.metoffice.gov.uk/weather/learn-about/space-weather/uk-scales

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Space Weather Forecast Headline: Slight chance of an isolated moderate-class flare. Slight chance of G1/Minor Storm interval.

Analysis of Space Weather Activity over past 24 hours
Solar Activity: Solar activity has been Low with only two weak Common class flares observed. There are three simple sunspots on the visible disc, all of these weak alpha regions. No Earth directed CMEs (coronal mass ejections) have been observed in coronagraph imagery in the last 24 hours.

Solar Wind / Geomagnetic Activity: The solar wind, has been elevated in the presence of a solar fast wind throughout the period. Total magnetic field was largely weak, with the north-south component also varying weakly. Geomagnetic activity was Quiet to Unsettled.

Energetic Particles / Solar Radiation: No solar radiation storms were observed.

Four-Day Space Weather Forecast Summary
Solar Activity: Solar activity is expected to be mainly Low, but with a slight chance of M-class flares due AR3017 which has just rotated across the western limb.

Solar Wind / Geomagnetic Activity: There is a chance that a south directed CME that left the Sun on 28 May, may glance the Earth on 01 June. The Earth is currently experiencing a solar fast wind, with this expected to gradually ease by the end of the period. Geomagnetic activity is expected to be mainly Quiet to Unsettled on day 1 and part of day 2, with a slight chance of Active and a very slight chance of G1/Minor Storms. Mainly Quiet conditions are then likely with a very slight chance on 01 June due to the possible CME arrival.

Energetic Particles / Solar Radiation: Solar radiation storms are unlikely.

Issued by Met Office Space Weather Advisor, Tel: +44 (0) 330 135 4254 Email: moswoc@metoffice.gov.uk

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Geomagnetic Storms:

Geo-Magnetic Storm Probability (Exceedance)	Level	Past 24 Hours (Yes/No)	Day 1 (00-24 UTC) (%)	Day 2 (00-24 UTC) (%)	Day 3 (00-24 UTC) (%)	Day 4 (00-24 UTC) (%)
Minor or Moderate	G1 to G2	No	10	5	1	5
Strong	G3	No	1	1	1	1
Severe	G4	No	1	1	1	1
Extreme	G5	No	1	1	1	1

Radio Blackouts - X Ray Flares:

X Ray Flares Probability	Level	Past 24 Hours (Yes/No)	Day 1 (00-24 UTC) (%)	Day 2 (00-24 UTC) (%)	Day 3 (00-24 UTC) (%)	Day 4 (00-24 UTC) (%)
Active	R1-R2 M Class	No	5	5	5	5
Very Active	R3 to R5 X	No	1	1	1	1

Solar Radiation Storms - (High Energy Protons):

Radiation Storms Probability (Exceedance)	Level (cm^{-2} sr^{-1} s^{-1})	Past 24 Hours (Yes/No)	Day 1 (00-24 UTC) (%)	Day 2 (00-24 UTC) (%)	Day 3 (00-24 UTC) (%)	Day 4 (00-24 UTC) (%)
Active	≥ S1	No	1	1	1	1
Very Active	≥ S3 *	No	1	1	1	1

* S3 ≥ 10 MeV ≥ 1000 pfu and / or ≥ 50 MeV ≥ 10 pfu. (pfu = $cm^{-2}sr^{-1}s^{-1}$)

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